

Water Quality Activities for Youth

Are you looking for activities and programs related to water quality? Would you like to teach water quality topics but don't have the resources and/or background? Utah State University Water Quality Extension's programs may be just what you need! These programs help students understand how streams and lakes function within watersheds and how activities and land use in the watershed affect the health of the water bodies. The students develop a sense of place and a sense of community. The programs encourage students to become involved in their watersheds through activities ranging from monitoring to stewardship and community outreach projects.

Our programs are very successful and have consistently reached over 6,000 youth per year in programs ranging from 45 minutes to all day. We also provide educator training on topics such as watershed functions, water monitoring, macro-invertebrates, wetlands, and elementary age water activities.

Our programs and activities are flexible and can be used with all ages, including adults. The activities can be used in a variety of settings, including, but not limited to

- water fairs
- after-school programs
- in-class presentations
- nature centers
- summer camps
- 4-H
- boy and girl scouts
- informational booths
- citizen monitoring groups

YOUTH ACTIVITIES / PROGRAMS:

Bugs Don't Bug Me (for all ages) – Students learn about aquatic macro-invertebrates (critters that live in the water, have no backbone, and are visible to the naked eye), the adaptations they have to live in the water, macroinvertebrate anatomy, and feeding habits. We also relate these activities to water quality, and older students may want to evaluate the quality of the water using the macro-invertebrates as an indicator.





Middle school students performing water quality tests.



Stream Side Science (for older students, grades 6-12) – Students monitor the quality of a local lake, river or stream through hands-on field tests and data collection. We provide equipment for and assistance in monitoring dissolved oxygen, temperature, turbidity, pH, and nitrogen. Participants are helped to not only understand their test results, but to also make a connection between what the tests say and the implications the results have on the health of the water body. Students may also want to include macroinvertebrate and riparian area studies in their monitoring activities. We provide 11 lesson plans and activities on water quality monitoring in our Stream Side Science Manual. These lesson plans are also correlated to the 9th grade Earth Systems Science standards in Utah schools. Check out website for a PDF of the manual, or call (435) 797-2580 to receive a hard copy.

Utah Stream Team (all ages) – The Utah Stream Team Manual is a comprehensive monitoring manual designed for use by citizens wanting to know more about their local waterbody. The resources provided in the manual give background information, simple monitoring techniques, and explanations of the monitoring results. This manual is perfect for anyone interested in starting a monitoring program in their area.

Water Quality Activities (for younger students, grades k-6) – Students learn about water pollution through activities involving graphing and math skills as well as critical thinking and predicting impacts. Our “Water Pollution Graphing Activity” introduced students to the idea of water pollution and has them identify possible pollution sources. In addition, plastic watershed models are available for check out from the County Extension offices. These models are a great way to demonstrate pollutant movement through a watershed. See our webpage for county contact information.



Students spraying the watershed model.



Students participating in a water activity.

Water Cycle Activities (for younger students, grades k-6) – Participants learn about the water cycle through fun, hands-on activities. The activities range from a dice game to dramatic

interpretation to a water cycle relay race. These activities can be easily tied to water quality as well.

ADULT ACTIVITIES / PROGRAMS:

Citizen Monitoring - Citizens and local groups can participate in monitoring activities through the Utah Stream Team program (mentioned above) and “Adopt – A – Waterbody.” Participation ranges from organizing a clean-up on a local stream to performing water chemistry tests and assessing water quality.

Utah Lake Watch – Interested citizens can help collect data on a local lake or reservoir. This program measures the turbidity or clarity of water which can help determine the health of the waterbody. Volunteers collect data at least once a month from March through September.



EDUCATOR TRAININGS:

Stream Side Science: This training focuses on watershed functions, and introduces participants to water quality monitoring, including dissolved oxygen, temperature, turbidity, nutrients, pH, macroinvertebrates and riparian vegetation. The trainings helps people understand and interpret the results of their tests.

Advanced Macroinvertebrates: This workshop introduces participants to classification of aquatic macroinvertebrates, gives hands on experience with field collection techniques, and identification. Participants walk away with a complete “bug” collection they have collected and identified themselves.

Project WET – This workshop focuses on activities for younger students relating to water concepts. Participants are given the Project WET guide which contains over 80 activities and lesson plans.



FOR MORE INFORMATION:

Please contact USU Water Quality Extension at (435) 797-2580, or go to our website at www.extension.usu.edu/waterquality.